

CLAIMS

We claim:

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Sub
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1. A method of controlling a message sent from a message source to a message
5 receiving device using a gateway, the method comprising:

transmitting a data unit associated with the message from the message source to
the gateway;

determining whether the message source has exceeded a threshold value
associated with sending messages; and

10 transmitting a response signal from the gateway to the message source indicating
an error if the message source has exceeded the threshold value.
 2. The method of claim 1, further comprising:

rejecting further messages transmitted from the message source to the gateway
15 when the determining step indicates that the message source has exceeded the threshold
value.
 3. The method of claim 2, wherein transmitting the response signal further
comprises transmitting a command status signal indicating a throttling error.
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 4. The method of claim 3, further comprising:

transmitting the message from the gateway to a destination message center if the
determining step indicates that the message source has not exceeded the threshold value.
 - 25 5. The method of claim 4, further comprising:

logging in the gateway all events associated with determining whether the message source has exceeded the threshold value.

6. The method of claim 5, wherein logging in the gateway all events associated with determining whether the message source has exceeded the threshold value further comprises logging the time, message source subject to throttle control, number of messages rejected, and throttle control limit.

7. The method of claim 3, further comprising:
signaling an alarm when the threshold limit is exceeded by a message source.

8. The method of claim 7, wherein the alarm includes a time, a message source subject to throttle control, number of messages rejected, and threshold value.

9. The method of claim 8, wherein the threshold value is a throttle control limit.

10. The method of claim 3, wherein the command status signal indicating a throttling error further instructs the message source to reduce a message sending rate.

11. The method of claim 9, further comprising:
transmitting an alarm from the message source to the gateway after the message source receives the alarm indicating that the threshold limit is exceeded by a message source.

12. The method of claim 11, wherein the alarm transmitted from the message source to the gateway further comprises a destination gateway name, a message rate when it received the throttle error signal, and a new message rate.

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13. A method of providing throttle control in a gateway between a message source and a destination message center, the method comprising:

receiving a message from a message source at the gateway;

determining whether the message source has exceeded a throttle control limit;

10 and

transmitting a throttling error to the message source if the message source has exceeded the throttle control limit according to the determining step.

14. The method of providing throttle control of claim 13, further comprising:

15 reducing a message sending rate from the message source after receiving the throttling error.

15. The method of providing throttle control of claim 13, further comprising:

20 invoking throttle control if the message source has exceeded the throttle control limit according to the determining step.

16. The method of providing throttle control of claim 15, wherein throttle control further comprises rejecting messages transmitted by the message source to the gateway while the message source is transmitting messages at a rate exceeding the throttle control

25 limit.

17. The method of providing throttle control of claim 16, wherein the throttle control limit is approximately between 0.1 messages per second and 500 messages per second.

5 18. The method of providing throttle control of claim 17, further comprising:
storing a throttle control limit on a per message source basis in the gateway.

19. The method of providing throttle control of claim 13, further comprising:
routing the message to a message center if the determining step determines that the
10 throttle control limit is not exceeded.

20. The method of providing throttle control of claim 19, further comprising:
logging all throttle control events to an event log.

15 21. The method of providing throttle control of claim 15, further comprising:
issuing an alarm from the gateway to the message source when throttle control is
invoked.

22. The method of providing throttle control of claim 21, wherein issuing an alarm
20 further comprises providing a time, the message source subject to throttle control, a
number of messages rejected and the throttle control limit.

23. The method of providing throttle control of claim 22, further comprising:
issuing a message source alarm from the message source to the gateway when the
25 message source receives the throttling error.

24. The method of providing throttle control of claim 23, wherein the message source alarm provides a gateway name, a message rate of the message source when the throttle error was received, and a new message rate.

5 25. A short message point-to-point gateway for controlling a volume of messages transmitted from a message source to a message-receiving device, the short message point-to-point gateway comprising:

a receiving module that receives messages transmitted from the message source;

a determination module that determines whether the message source has

10 exceeded a threshold value associated with sending messages;

a transmitting module that transmits a response signal to the message source indicating an error if the message source has exceeded the threshold value.